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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,051	03/17/2005	Kimiyo Banno	0171-1190PUS1	6378

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BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER
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KOSLOW, CAROL M

ART UNIT	PAPER NUMBER
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1755

NOTIFICATION DATE	DELIVERY MODE
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06/21/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

**Office Action Summary**

Application No.

10/528,051

Applicant(s)

BANNO ET AL.

Examiner

C. Melissa Koslow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11 is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 6-10 is/are rejected.
- 7) ☒ Claim(s) 2, 3 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/17/05, 3/17/05, 2/1/07</u> . | 6) <input type="checkbox"/> Other: ____  |

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The non-English references cited in the information disclosure statements have been considered with respect to the provided English abstracts or partial translations.

The original claims included a claim 12 to a non-aqueous electrolyte secondary cell, but the preliminary amendment of 17 March 2005 does not include claim 12, so there are only 11 claims presented. There is no indication that claim 12 was canceled. Thus the actual number of claims is unclear, 11 or 12. Since the preliminary amendment replaced the original claims, for the purpose of this action, only pending claims 1-11 will be examined. Applicants will be allowed to reinsert claim 12 without an election by original presentation being made.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent 5,378,381.

This reference teaches a polymer electrolyte-forming composition comprising dialkylaminoalkylmethacrylate alkyl salts, where the alkyl groups contain 1-3 carbon atoms and the anion is a monovalent group, such as halides. The reference specifically teaches dimethylaminoethylmethacrylate methyl chloride. The reference teaches the claimed composition.

Claims 1, 4 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent 5,643,490.

This reference teaches a polymer electrolyte-forming composition comprising dialkylaminoalkylmethacrylate alkyl salts, where the alkyl groups contain 1-3 carbon atoms and

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the anion is a monovalent group, such as halides; a heterocyclic quaternary ammonium ionic liquid, an ionic aluminum salt and acrylic or methacrylic monomers. The reference also teaches polymer electrolytes produced from this composition. The reference teaches the claimed composition and electrolyte.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,643,490.

As discussed above, this reference teaches the claimed composition. The preferred anion are halides, but the reference suggests that any known anion used to form quaternary ammonium ionic liquid salts, which are used in electrolytes, can be utilized. Thus one of ordinary skill in the art would have found it obvious to select the claimed anions, which are known anion used to form quaternary ammonium ionic liquid salts, which are used in electrolytes. The reference suggests the claimed composition.

Claim 11 is allowable over the cited art of record.

Claim 2, 3 and 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The electrical double-layer capacitor of claim 11 is not taught or suggested by the cited art of record. The taught polymer electrolytes is used in aluminum cells which are not double-

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layer capacitors. It is also noted that the cited references do not teach non-aqueous lithium electrolytic secondary cells. There is no teaching or suggestion in the cited art of record of the composition of claim 2. There is no suggestion in the art to use the ionic liquid of claim 2 as the ionic liquid in the composition of U.S. patent 5,643,490. There is no teaching or suggestion in the cited art of record of quaternary ammonium salts having the formula of claims 3 and 5. The art teaches that three alkyls attached to the N atom and not to the O atom are the same and not different as claimed.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk  
June 15, 2007

  
C. Melissa Koslow  
Primary Examiner  
Tech. Center 1700